

REMARKS

In the Office Action, claims 1-30 were rejected. By the present response, claims 1, 13, and 23 are amended and claim 18 is cancelled. Upon entry of the amendments, claims 1-17 and 19-30 will be pending in the present patent application. Reconsideration and allowance of all pending claims are requested.

Objections to the Specification

The specification was objected to because of certain typographical error. Paragraph [0030] of the specification has been amended to correct the informalities.

Double Patenting

In the Office Action, claims 1, 7-9, 13-15, 23 and 27 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3, 14, 16 and 17 of Dumoulin et al., US Patent No. 5,211,165, (hereinafter "Dumoulin '165"). Claims 2-6, 10, 16-19, 22, 24-26 and 28-30 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of Dumoulin '165 in view of Dumoulin et al., US Patent No. 5,251,635, (hereinafter "Dumoulin '635"). Claims 2, 11, 12, 20, and 21 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of Dumoulin '165 in view of Panescu et al., US Patent No. 5,916,163, (hereinafter "Panescu").

Independent claims 1, 13 and 23 are amended to more clearly point out certain of the claimed subject matter. Specifically, independent claim 1 and 23 now recites, in generally similar language, *target region of interest within the subject selected by an operator from an image*. Similarly, Independent claim 13 now recites *the interface being adapted to respond to operator input of coordinates marking a target position of the medical device defining the region of interest*.

Applicants respectfully submit that amended independent claims 1, 13 and 23 are patentable over Dumoulin '165. Claim 18 has been cancelled by the present response. Claims 2-12, 14-17, 19-22 and 24-30 depend directly or indirectly from claims 1, 13 and 23 respectively. Accordingly, the Applicants submit that claims 2-12, 14-17, 19-22 and 24-30 are allowable by virtue of their dependency from an allowable base claim. Applicants also submit that the dependent claims are further allowable by virtue of the subject matter they separately recite. Accordingly, Applicants request that the Examiner reconsider and remove the obviousness-type double patenting rejection of claims 1-17 and 19-30.

Rejections Under 35 U.S.C. § 102

In the Office Action, claims 1-9, 13-15, 17, 19, 22-25 and 27 were rejected under 35 U.S.C. § 102(b) as being anticipated by Dumoulin '165. Claims 1-10, 13-19, and 22-30 were rejected under 35 U.S.C. § 102(b) as being anticipated by Dumoulin '635. A *prima facie* case of anticipation under 35 U.S.C. § 102 requires a showing that each limitation of a claim is found in a single reference, practice or device. *In re Donohue*, 226 U.S.P.Q. 619, 621 (Fed. Cir. 1985). Applicants respectfully assert that the present invention, as recited in amended independent claims 1, 13 and 23 is patentable over Dumoulin '165 and Dumoulin '635.

Independent claims 1, 13 and 23 are amended to more clearly point out certain of the claimed subject matter. Specifically, independent claims 1 and 23 now recite, in generally similar language, *a target region of interest within the subject selected by an operator from an image*. Similarly, independent claim 13 now recites *the interface being adapted to respond to operator input of coordinates marking a target position of the medical device defining the region of interest*.

The Dumoulin '165 discloses a tracking and imaging system to follow the position and orientation of an invasive device within a subject. The Dumoulin '165 also

discloses automatic placement and alignment of the subject by use of a support arm within a desired region around invasive device (*see*, Dumoulin '165, column 7, line 18-32). On the other hand, Dumoulin '635 discloses stereoscopic tracking of the three-dimensional position of the invasive device without using X-rays. Dumoulin '635 further discloses automatic placement and alignment of the subject by use of a support arm within a desired region around invasive device similar to Dumoulin '165.

However, both Dumoulin '165 and Dumoulin '635 fail to disclose or suggest that the *target region of interest within the subject can be selected by the operator from the image*. Additionally, both references fail to disclose positioning of the medical device within the target region of interest without moving the subject. Applicants respectfully submit that the positioning of the medical device within the target region of interest may be achieved in the present technique either by moving the subject or the medical device itself. Further, both the references fail to disclose an interface that is adapted to respond to operator input of coordinates thereby marking a target position of the medical device that defines the region of interest. Applicants, therefore, believe that in absence of the interface as described above, selection of the target region of interest within the subject by the operator from the image is not enabled in either of the references.

At least because Dumoulin '165 and Dumoulin '635 either alone or in combination fail to disclose or suggest selection of the target region of interest within the subject by the operator from the image as claimed, the reference cannot support a *prima facie* case of anticipation of claims 1, 13 and 23.

Claim 18 has been cancelled by the present response. Claims 2-10, 14-17, 19, 22 and 24-30 depend directly or indirectly from claims 1, 13 and 23 respectively. Accordingly, the Applicants submit that claims 2-10, 14-17, 19, 22 and 24-30 are allowable by virtue of their dependency from allowable base claims. Applicants also submit that the dependent claims are further allowable by virtue of the subject matter they

separately recite. Thus, it is respectfully requested that the rejection of claim 1-10, 13-17, 19, and 22-30 under 35 U.S.C. §102(b) be withdrawn.

Rejections Under 35 U.S.C. § 103

In the Office Action, claims 2, 11, 12, 20 and 21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Dumoulin '635 in view of Panescu. Claims 2, 11, 12, 20 and 21 were also rejected under 35 U.S.C. § 103(a) as being unpatentable over Dumoulin '165 in view of Panescu. Claims 6, 17, and 24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Dumoulin '165 in view of Twiss et al., U.S. Patent No. 5,375,596. Claims 10, 16, 18, 26 and 28-30 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Dumoulin '165 in view of Dumoulin '635.

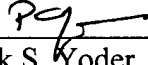
As discussed above, the Dumoulin '165 and Dumoulin '635 references alone or in combination do not teach, suggest or disclose each and every aspect of Applicants' recited invention as defined by independent claims 1, 13 and 23. Moreover, the secondary references do nothing to obviate these deficiencies. Claims 2, 6, 10-12, 16-17, 20, 21, 24, 26 and 28-30 depend directly or indirectly from claims 1, 13 and 23 and are allowable by virtue of such dependency, as well as for the subject matter they separately recite. Thus, it is respectfully requested that the rejection of claims 2, 6, 10-12, 16-17, 20, 21, 24, 26 and 28-30 under 35 U.S.C. §103(a) be withdrawn.

Conclusion

In view of the remarks and amendments set forth above, Applicants respectfully request allowance of the pending claims. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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